determining the one or more fine-grained estimates based on said set of fine-grained correlations.

43. (New) The method of claim 42, wherein determining said set of fine-grained values of interest comprises the steps of:

determining a set of initial estimates for said signal parameter;

determining, based on a pre-selected confidence level, a plurality of ranges of fine-grained values of interest, wherein each said range corresponds to one said initial estimate; and

combining said plurality of ranges to yield said set of fine-grained values of interest.

44. (New) The method of claim 43, wherein calculating said set of fine-grained correlations comprises the steps of:

selecting one said fine-grained value of interest;

determining a subset of coarse-grained correlations from said set of coarse-grained-correlations based on a pre-selected desired accuracy and a type of filter;

interpolating said subset of coarse-grained correlations; and

repeating the above three steps for all the fine-grained values of interest in said set of fine-grained values of interest.

45. (New) The method of claim 44, wherein determining said set of initial estimates further comprises the step of calculating a set of coarse-grained correlation magnitudes.

46. (New) The method of claim 44, wherein determining said set of initial estimates further comprises the step of comparing the set of coarse-grained correlation magnitudes with a pre-selected magnitude threshold.

47. (New) The method of claim 45, wherein determining said set of initial estimates further comprises the step of determining a highest coarse-grained correlation magnitude.

a1

48. (New) The method of claim 47, wherein determining said set of initial estimates further comprises the step of selecting coarse-grained correlation magnitudes that are within a pre-selected magnitude range of said highest coarse-grained correlation magnitude.

49. (New) The method of claim 44, wherein said set of coarse-grained correlations corresponds to a range of coarse hypothesized values for said signal parameter, wherein said range of coarse hypothesized values depends on:

an approximate time when said receiver received said received signal;

a time uncertainty quantity associated with said approximate time;

an approximate position of said receiver; and

a position uncertainty quantity associated with said approximate position of said receiver.

50. (New) The method of claim 46, wherein said set of coarse-grained correlations corresponds to a range of coarse hypothesized values for said signal parameter, wherein said range of coarse hypothesized values depends on:

an approximate time when said receiver received said received signal;

a time uncertainty quantity associated with the approximate time;

an approximate position of said receiver; and

a position uncertainty quantity associated with said approximate position of said receiver.

a1

51. (New) The method of claim 47, wherein said set of coarse-grained correlations corresponds to a range of coarse hypothesized values for said signal parameter, wherein said range of coarse hypothesized values depends on:

an approximate time when said receiver received said received signal;

a time uncertainty quantity associated with the approximate time;

an approximate position of said receiver; and

a position uncertainty quantity associated with said approximate position of said receiver.

52. (New) The method of claim 48, wherein said set of coarse-grained correlations corresponds to a range of coarse hypothesized values for said signal parameter, wherein said range of coarse hypothesized values depends on:

an approximate time when said receiver received said received signal;

a time uncertainty quantity associated with the approximate time;

an approximate position of said receiver; and

a position uncertainty quantity associated with said approximate position of said receiver.

53. (New) The method of claim 44, wherein calculating said set of fine-grained correlations is based on a band-limited interpolation technique.

a1

54. (New) The method of claim 49, wherein calculating said set of fine-grained correlations is based on a band-limited interpolation technique.

55. (New) The method of claim 50, wherein calculating said set of fine-grained correlations is based on a band-limited interpolation technique.

56. (New) The method of claim 51, wherein calculating said set of fine-grained correlations is based on a band-limited interpolation technique.

57. (New) The method of claim 52, wherein calculating said set of fine-grained correlations is based on a band-limited interpolation technique.

58. (New) The method of claim 42, wherein determining said set of fine-grained estimates further comprises the step of calculating a set of fine-grained correlation magnitudes.

59. (New) The method of claim 58, wherein determining said set of fine-grained estimates further comprises the step of determining a highest fine-grained correlation magnitude.

60. (New) The method of claim 59, wherein determining said set of fine-grained estimates further comprises the step of selecting fine-grained correlation magnitudes that are within a pre-selected magnitude range of said highest fine-grained correlation magnitude.

61. (New) The method of claim 58, wherein determining said set of fine-grained estimates further comprises the step of comparing said set of fine-grained correlation magnitudes with a pre-selected magnitude threshold.

62. (New) In a position determining system, a method for calculating one or more fine-grained estimates, wherein said fine-grained estimates are for a signal parameter, and wherein said signal parameter is for a received signal, the method comprising the steps of:

receiving said received signal at a receiver;

pre-processing said received signal;

obtaining a set of coarse-grained correlations;

determining a set of fine-grained values of interest:

generating a parametric template representing correlation values associated with said received signal;

calculating a weighted square error function by performing a linear regression for each said fine-grained value of interest; and

determining said one or more fine-grained estimates based on said weighted square error function.

63. (New) The method of claim 62, wherein determining said set of fine-grained values of interest comprises the steps of:

a1

determining a set of initial estimates for said signal parameter;

determining, based on a pre-selected confidence level, a plurality of ranges of fine-grained values of interest, wherein each said range corresponds to one said initial estimate; and

combining said plurality of ranges to yield said set of fine-grained values of interest.

64. The method of Claim 63, wherein the step of determining said one or more fine-grained estimates comprises the step of determining a lowest weighted square error value.

65. (New) The method of Claim 63, wherein the step of determining said one or more fine-grained estimates further comprises the step of comparing said weighted square error function with a pre-selected error threshold.